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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

HOMEMAKERS' CHAT TUESDAY, January 16, 1940.

(FOR BROADCAST USE ONLY)

SUBJECT: "QUESTIONS AND ANSWERS." Information from the Office of Information, U.S.D.A.

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The first question coming up in this week's batch of letters is about beeswax in candles. Here is the question as it comes from the mailbag:

"I understand that pure beeswax is fine material for high-quality candles, but that beeswax as it comes from the hive contains pollen and other impurities that clog the candlewick. How is beeswax purified?"

This questioner is right in saying that pure beeswax is one of the finest waxes for candles and that the problem is to make it pure. Pure beeswax burns with practically no ash or smoke. But wax as it comes from the hive usually contains pollen and a substance known as bee glue which the insects gather from plants. Bee glue does not melt or burn at the same temperature as wax. So when bits of it get into the candlewick, they prevent the even flow of melted wax and make a sooty smoke.

Now about purifying beeswax for candles--and also for cosmetics. This is a problem scientists of the Federal Department of Agriculture and also of the California Experiment Station have been working on. They report that both heat and dilute acid help get rid of the pollen and bee glue in the wax. And they find that heating the wax by sunshine is more successful than the usual way of heating the wax over hot water. Sun heat helps bleach the wax. Then boiling in dilute acid removes what is left of the pollen and bee glue without harming the wax.

Of course, beeswax has many uses where purifying isn't necessary. A great deal of beeswax is used for waxing thread, for grafting and for waterproofing. Bee wax and pollen do no harm here. But for candles and cosmetics the pure wax is needed

By the way, you may be interested to know that these recent experiments on beeswax have exploded an old idea. People have always thought that heat caused beeswax to turn dark. The scientists have found that it was not heat but heating in contact with iron that darkened beeswax. Beeswax heated in iron kettles turned dark. But beeswax kept hot for hours in aluminum, stainless steel, glass or nickel did not turn dark.

Well, so much for the first question about beeswax. Now one about cotton twine. Here's a letter that says: "Why do they always use twine made from jute in our post-offices instead of twine made from cotton?"

Uncle Sam as postal clerk uses carloads of twine each year for tying bundles of assorted mail. And he has been using jute twine for economy and because cotton twine has not had the right qualities.

For tying bundles of letters Uncle Sam needs twine strong enough to hold in spite of rough usage. And he wants twine that is not fine enough to cut into the letter or cut the hands of clerks as they tie the mail. Finally, he wants twine that won't stretch and allow the bundles to loosen and the letters to scatter under rough handling. Jute twine has usually sold at less than half the price of cotton twine. But last year when the price per pound for cotton twine was only 25 percent higher than jute twine, the cotton research scientists of the Department of Agriculture got busy on developing a cotton twine with the right qualities for postal use.

These scientists recently reported that they had worked out a satisfactory cotton twine. They treat the twine with a sizing mixture containing a small amount of pine-tar oil to keep down mildew. They they dry it under tension to remove most of the stretch and improve the strength. The twine breaks well after tying but also is strong enough and firm enough to hold the bundle safe in the mail pouch.

Moreover, the new cotton twine runs about 1350 yards to the pound as compared with 850 yards to the pound of jute twine. This means that a slightly higher price for cotton twine would be offset by the increased yardage.

Here's the last question for today: "Where can I get complete directions for making different kinds of bread?"

You can get this information from a bulletin published by the U. S. Department of Agriculture. The bulletin is called "Homemade Bread, Cake and Pastry," No. 1775. It is free from the Department of Agriculture, Washington, D.C. as long as the supply holds out. A post card will bring it to you. Once again--"Homemade Bread, Cake and Pastry," Farmers' Bulletin No. 1775.

That's all the questions for today. More next Tuesday.

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